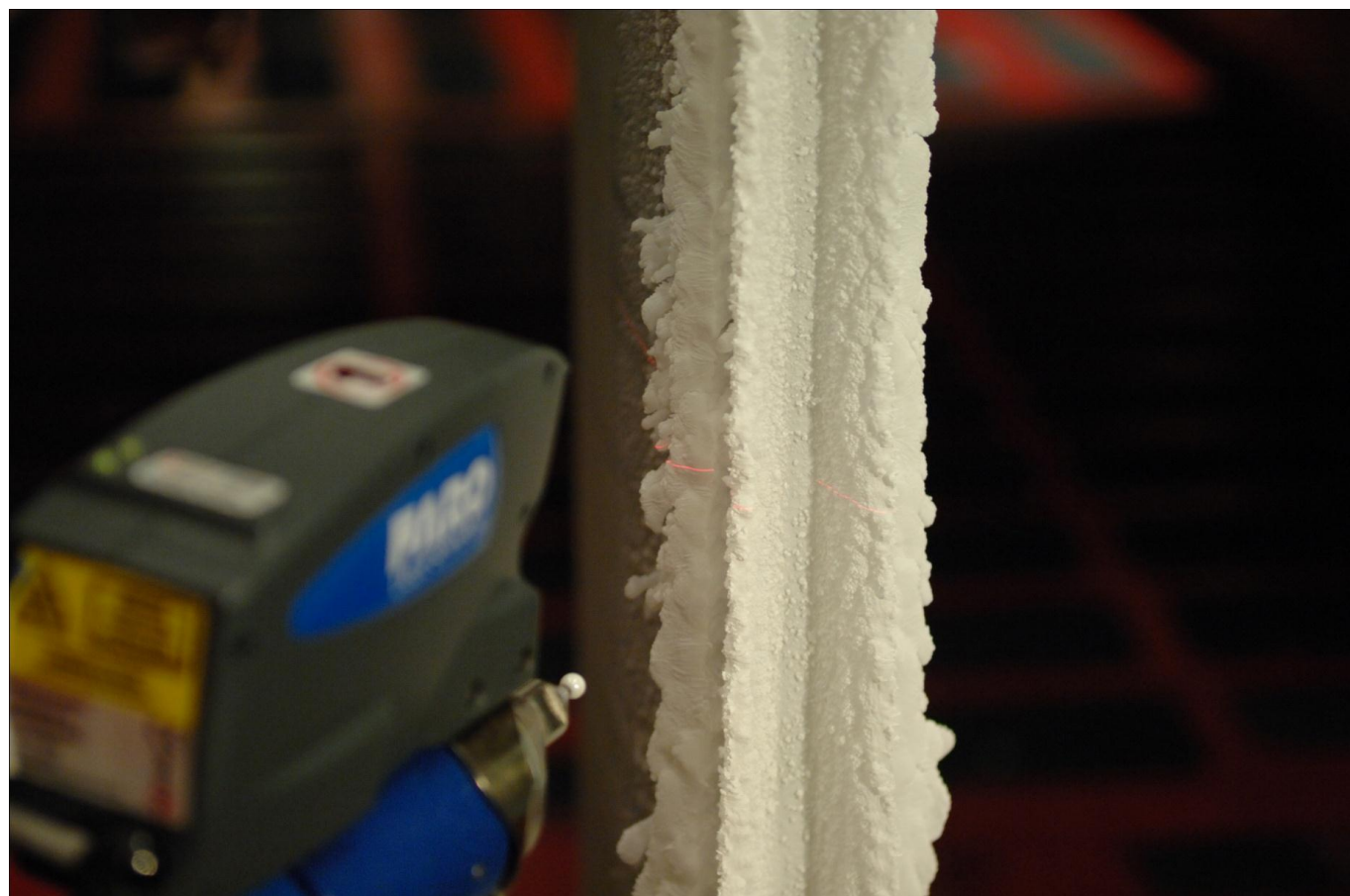
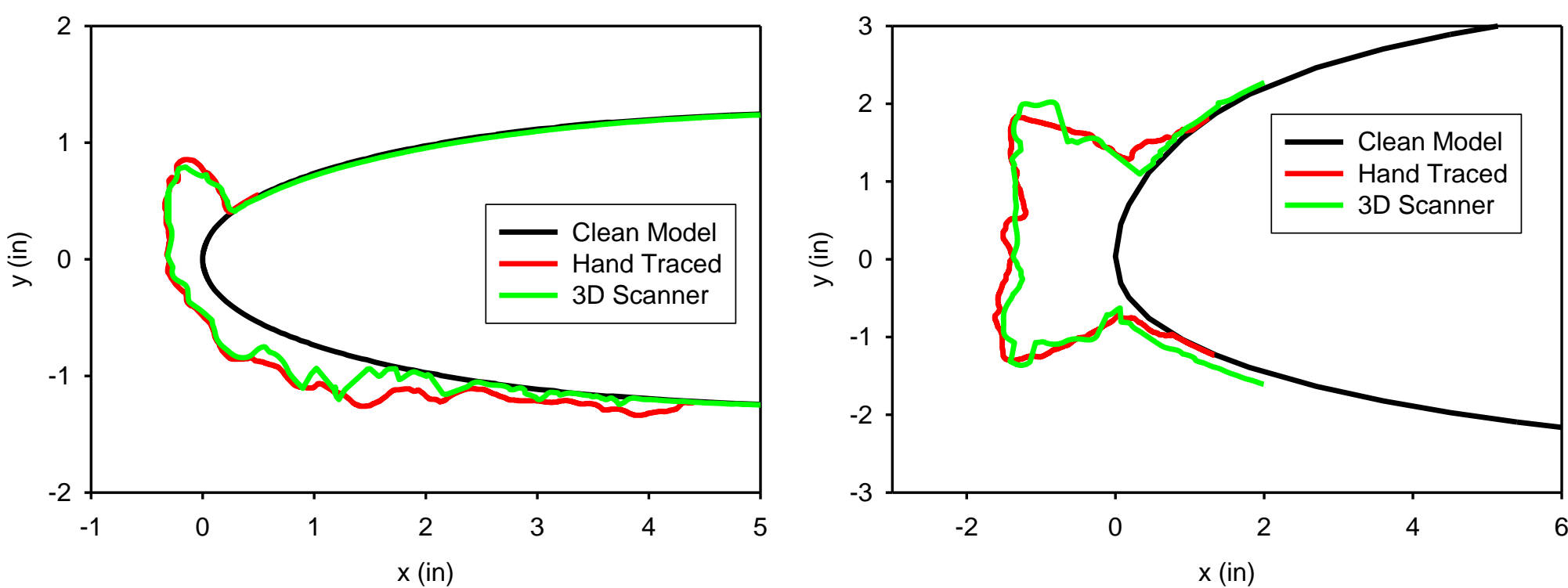


3D Digital Scanning of Ice Shape

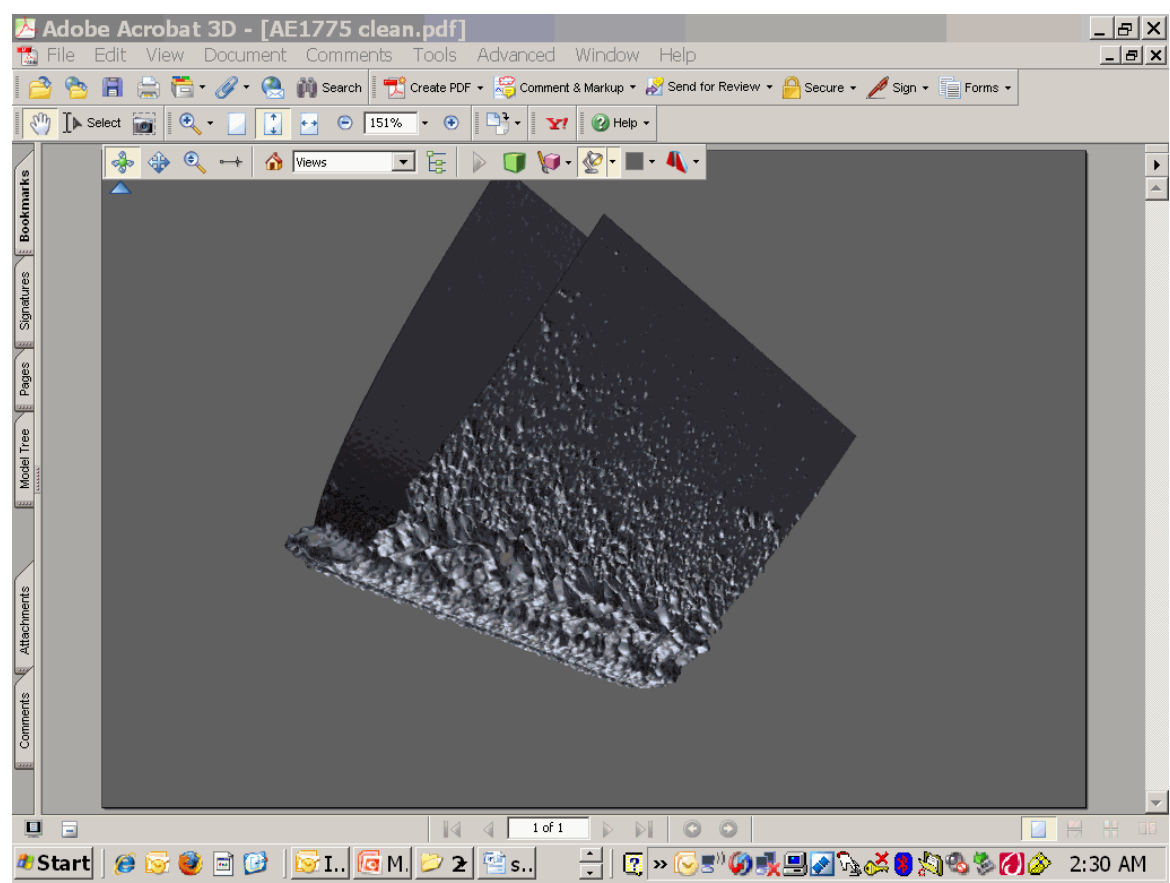
- The main goal of the Airframe Icing Technical Challenge is to achieve acceptance of experimental and computational icing simulation tools.
- It is necessary to develop suitable means of recording and archiving fully 3D descriptions of experimental ice accretion geometry.
- Commercial laser-based scanners are being adapted for this task.



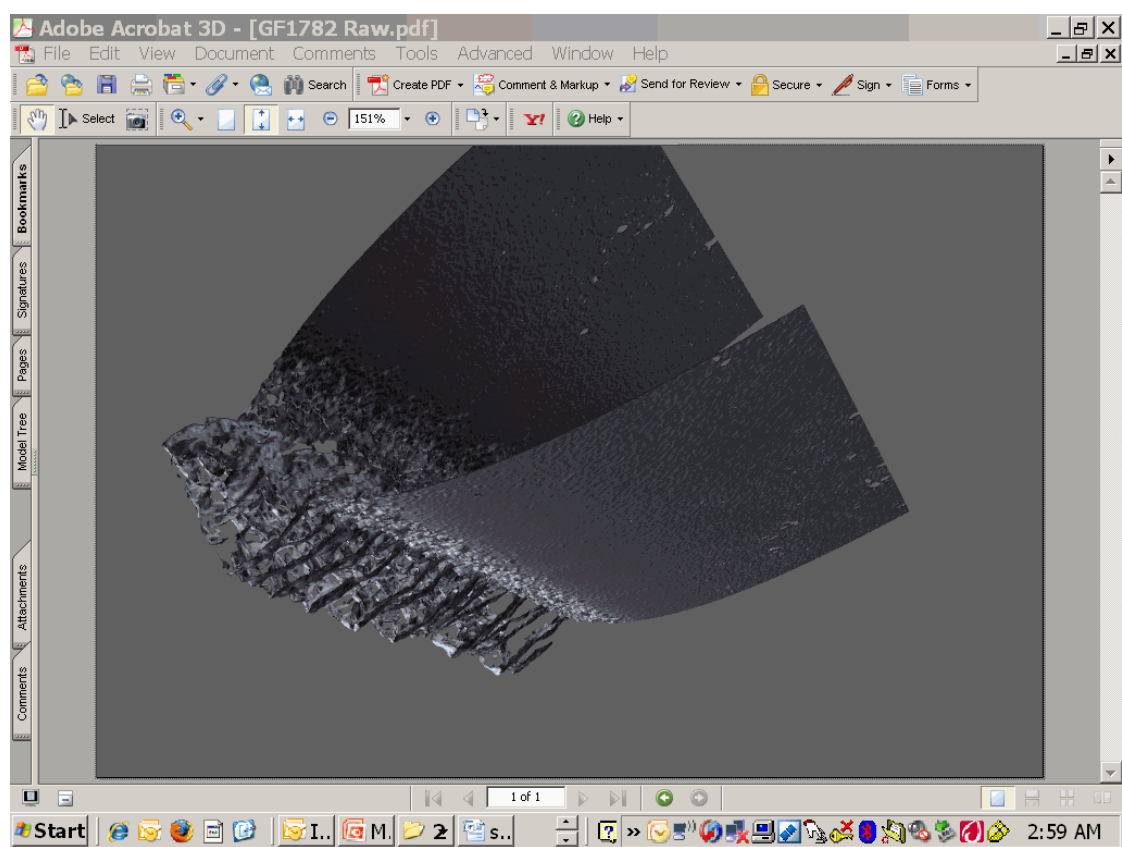
- Four candidate laser scanning systems evaluated for capability to operate in the Icing Research Tunnel environment
- Evaluated on the basis of criteria having to do with operations, scanning capability, accuracy and cost.
- Candidate software used to post-process the scanner data are also being evaluated.
- One laser scanning hardware system and post-processing software will be chosen for further development and validation.



Comparison of 3D scanned data to hand tracing.



3D scanned data and photo of glaze ice shape.



3D scanned data and photo of swept wing ice shape.